

App. No. 09/892,679
Amendment Dated February 8, 2005
Reply to Office Action of January 3, 2005

REMARKS/ARGUMENTS

Claims 1-17 remain in this application for further review and new claims 18-20 have been added. Claims 1-12 and 14-17 have been amended as set forth above to correct minor typographical errors. Specifically, the claims have been amended to change "if" to "when" in order to overcome objections to the same. Claim 10 has been amended to depend from claim 9. Also, claims 1-7 have been amended to recite a "computer-implemented" method in order to fully comply with 35 U.S.C. § 101. Applicants believe that these changes overcome the objections set forth in the Office Action. No new matter has been added.

I. Rejection of claims 1-17 under 35 U.S.C. § 102(e)

Claims 1-17 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,799,322 issued to Mosher, Jr. (hereinafter "Mosher"). Applicants respectfully disagree with the rejection. Applicants believe that Mosher teaches a very different invention than the invention recited in claims 1-17 of the present invention. After thoroughly reviewing the specification of Mosher, applicants have set forth an explanation below in hopes of clarifying the teachings of Mosher. In the Examiner's discretion after reviewing the below explanation, applicants are open to further discussion of Mosher via a telephonic interview.

A. Elements of the Independent Claims Not Taught by Mosher

Mosher does not teach or otherwise suggest all the limitations of claims 1-17. Claims 1, 8 and 14 are independent claims, while claims 2-7, 9-13 and 15-17 depend upon and further limit

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claims 1, 8 and 14, respectively. Applicants' claim 1 specifically recites the following elements that are not taught or suggested by the Mosher reference:

"determining a desired *synchronization state* to synchronize from *based on the sent sync key*" (Emphasis added).

"the partner determining when the sent sync key *is valid*, and when the sync key is valid:

attempting to synchronize with the initiator *from the desired synchronization state to a current state*; and
determining *when the attempted synchronization was successful*" (Emphasis added).

Applicants' claim 8 specifically recites the following elements that are not taught or suggested by the Mosher reference:

"a client *sending a sync key* to a server" (Emphasis added).

"*determining a desired synchronization state from the sent sync key*" (Emphasis added).

"attempting to synchronize with the client *to the desired synchronization state*" (Emphasis added).

Applicants' claim 14 specifically recites the following elements that are not taught or suggested by the Mosher reference:

"a synchronization device operating under the control of the operating environment and operative to perform actions, including:

receiving or sending a sync key to a synchronization partner;
determining a *desired synchronization state from the sync key*;
synchronizing with the client *from the desired synchronization state to a current state*; and
determining *when the synchronization was successful*" (Emphasis added).

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B. Teachings of Mosher

1. General Process

Mosher teaches a Remote Duplicate Database Facility (hereinafter "RDF"). *Mosher*, at col. 4, lines 1-14. A RDF is a database that stores back-up information in a remote area. *Mosher*, at col. 2, lines 1-18. For example, a company may have a local system in Seattle, Washington and a RDF located in Colorado. In this manner, if something catastrophic occurs in Seattle (i.e. explosion, volcano, etc.), the RDF database is always secure with the company information in Colorado.

Mosher pertains to an efficient manner of updating the RDF with the information from the local system. *Mosher*, at col. 4, lines 15-26. The local system has a transaction management facility. *Mosher*, at col. 6, lines 40-42. The transaction management facility writes audit entries to a Master Audit Trail (hereinafter "MAT"). *Mosher*, at col. 6, lines 40-42. The audit entries are entries that indicate any changes to files on the local system. *Mosher*, at col. 6, lines 40-46. Such audited files are maintained for volumes of data that need to be backed-up on the RDF. *Mosher*, at col. 6, lines 40-46. Succinctly stated, audited files are a record of changes to the files that have been modified in the local system. The audit files may contain commit/abort records that pertain to modifications that take place on the local system. *Mosher*, at col. 6, lines 40-46; col. 8, lines 1-8; col. 11, lines 58-64. Stated another way, the audit files indicate which modifications on the local database were committed to the local database and which modifications were aborted. *Mosher*, at col. 6, lines 40-46; col. 8, lines 1-8; col. 11, lines 58-64.

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Mosher also teaches an extractor process for extracting/reading the MAT and sending the audit records associated with the RDF to a receiver process that is located on the RDF. *Mosher*, at col. 6, lines 59-65. The extractor process stores the audit record in a series. *Mosher*, at col. 6, lines 66-67. The files or messages are sent to the receiver process in the form of message buffers. *Mosher*, at col. 7, lines 18-22. Mosher teaches that a set of buffers (typically four) is sent to the receiver process at a time. *Mosher*, at col. 7, lines 17-18. The extractor process does not wait for any acknowledgement or reply message from the receiver process. *Mosher*, at col. 7, lines 18-22. Rather, as long as another message buffer is available, the extractor process continues to process audit records for sending to the receiver process. *Mosher*, at col. 7, lines 23-26.

Once the receiver process receives the audit records from the extractor process, the receiver process sorts the audit records so that they may be sent to an appropriate updater process. *Mosher*, at col. 7, lines 54-60. For example, transactions that were committed or aborted on the local system are moved to an update process that is responsible for handling such a transaction. *Mosher*, at col. 7, lines 54-60. In this way a remote system may have a plurality of updater processes that each handle a certain type of transaction or a particular audit image. *Mosher*, at col. 7, lines 54-60. In sorting the audit records, the receiver process receives the commit abort records from the extractor process and then writes the commit abort records to a master image trail and stores the data in a status table. *Mosher*, at col. 7, line 65-col.8, lines 7. This storage takes place so the remote system can access the status table to determine the status of a transaction without having to access records in the master image trail, which is stored on disk. *Mosher*, at col. 7, line 65-col.8, lines 7. The transaction referenced above is the status of

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the transaction that took place on the local system. The transaction does not relate to a syncing operation

Innate in the general description above is that Mosher teaches a one-way system for backing-up a local system on a RDF. Data flows from the local system to the RDF. Data is not synchronized from the RDF to the local system. If a system failure occurs, the RDF (or a secondary back-up RDF) becomes the primary system. *Mosher*, at col. 7, lines 61-67.

2. *Mosher*, at col. 7, lines 33-40 as cited in the Office Action

Column 7, lines 33-40 of Mosher do not teach, "determining a desired synchronization state to synchronize from based on the sent sync key" as recited in claim 1. Also, column 7, lines 33-40 of Mosher do not teach, "determining a desired synchronization state from the sent sync key as recited in claim 8. Column 7, lines 33-40 of Mosher fails to teach, "determining a desired synchronization state from the sent sync key" as recited in claim 14.

Mosher specifically teaches as follows:

"The Extractor process 130 performs a single checkpoint operation during start-up of the Extractor process, and that checkpoint 158 *only sends a takeover location to the backup Extractor process 150*. (See FIG. 2.) It also does not durably store a context record. Rather, the Extractor process 130 instead *relies on information received from the Receiver process 132 when RDF is either starting up or restarting*, as will be explained in more detail below, as well as during an RDF startup." *Mosher*, at col. 7, lines 33-40. (Emphasis added).

Here, Mosher is teaching that when the extractor process is starting up, the extractor process only sends a takeover location to a *back-up extractor*. The back-up extractor and the primary extractor are associated with the local system. There is no teaching here of a sync key let alone determining a desired synchronization state from a sync key.

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3. *Mosher, at col. 44-52 as cited in the Office Action*

Column 7, lines 44-52 of Mosher do not teach, " the partner determining when the sent sync key is valid, and when the sync key is valid: attempting to synchronize with the initiator from the desired synchronization state to a current state " as recited in claim 1. Also, column 7, lines 44-52 of Mosher do not teach, " attempting to synchronize with the client to the desired synchronization state" as recited in claim 8. Column 7, lines 33-40 of Mosher fails to teach, " synchronizing with the client from the desired synchronization state to a current state " as recited in claim 14.

Mosher specifically teaches as follows:

The Receiver process 132 immediately acknowledges each received message buffer. No processing of the message buffer is performed before the acknowledgment is sent. The RDF system provides tight synchronization of the Extractor and Receiver processes and provides for *automatic resynchronization whenever a start or restart condition occurs*. For example, the two processes will resynchronize *whenever either process is restarted* or has a primary process failure, and whenever the Receiver process receives audit records out of order from the Extractor process. *Mosher, at col. 7, lines 44-52.* (Emphasis added).

Applicants assert that there is no teaching in Mosher of determining when a sent sync key is valid, or synchronizing from a desired synchronization state to a current synchronization state. Applicant does not believe that the above section can be interpreted as teaching these elements. Here Mosher is merely teaching that a synchronization takes place at start-up.

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4. Mosher, at col. 8, lines 1-7 as cited in the Office Action

Column 8, lines 1-7 of Mosher do not teach, " determining when the attempted synchronization was successful " as recited in claim 1. Also, column 8, lines 1-7 of Mosher do not teach, " determining when the synchronization was successful" as recited in claim 14.

Mosher specifically teaches as follows:

"Additionally, it stores data indicating the outcome of each *transaction, i.e., commit or abort*, to a transaction status table (TST) 144. Thus, the Receiver can access the TST 144, which is stored in memory, to determine the status of each transaction that has either committed or aborted without having to access records in the master image trail, which is stored on disk." *Mosher, at col. 8, lines 1-7.* (Emphasis added).

As more fully set forth above, the commit or abort transaction is the status of a transaction that took place on the local system. The commit or abort transaction does not relate to any type of status of a synchronization. See *Mosher, at col. 6, lines 40-46; col. 8, lines 1-8; col. 11, lines 58-64.*

B. Allowability of the Claims over Mosher

When the language of claims 1, 8 and 14 are read as a whole and Mosher is considered as a whole, claims 1, 8 and 14 are clearly allowable under 35 U.S.C. § 102. Applicants further assert that claims 2-7, 9-13 and 15-17 each contain patentable subject matter that is not taught or otherwise suggested by the Mosher reference. Furthermore, claims 2-7, 9-13 and 15-17 ultimately depend from independent claims 1, 8 and 14, respectively. Claims 1, 8, and 14 are allowable for the reasons set forth above. Therefore, applicants assert that claims 2-7, 9-13 and 15-17 are allowable for at least those same reasons.

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II. New Claims 18-20

Claims 18-20 are added for consideration in the present application. With respect to claims 18-20, applicants assert that: their limitations are not taught or otherwise suggested by the prior art of record, they do not constitute new matter, and that consideration of these claims should not require a further search for proper consideration. Applicants respectfully request consideration and allowance of claims 18-20.

III. Request for Further Consideration

In view of the foregoing, all pending claims are believed to be allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicant at the telephone number provided below.

Respectfully submitted,

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